



# *COMMONWEALTH of VIRGINIA*

## *DEPARTMENT OF ENVIRONMENTAL QUALITY*

TIDEWATER REGIONAL OFFICE

Molly Joseph Ward  
Secretary of Natural Resources

5636 Southern Boulevard, Virginia Beach, Virginia 23462  
(757) 518-2000 Fax (757) 518-2009  
[www.deq.virginia.gov](http://www.deq.virginia.gov)

David K. Paylor  
Director

Maria R. Nold  
Regional Director

March 30, 2016

Mr. Michael Porter  
Director of Corporate Support  
LifeNet Health  
1864 Concert Drive  
Virginia Beach, Virginia 23453

Location: Virginia Beach  
**Registration No.: 61713**

Dear Mr. Porter:

Attached is a permit to construct and operate a sterilization facility located in Virginia Beach, 5733 Bayside Road, Suites 103-108 in accordance with the provisions of the Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution.

The Department of Environmental Quality (DEQ) deemed the application complete on February 10, 2016.

This permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and/or civil charges. Please read all permit conditions carefully.

This permit approval to construct and operate shall not relieve LifeNet Health of the responsibility to comply with all other local, state, and federal permit regulations.

Please note that diesel engine-generators manufactured after April 1, 2006, may be affected facilities under 40 CFR 60, New Source Performance Standard (NSPS) Subpart IIII (Stationary Compression Ignition Internal Combustion Engines) and that all stationary reciprocating internal combustion engines (RICE) are affected facilities under 40 CFR 63, National Emission Standards for Hazardous Air Pollutants for Source Categories (MACT) Subpart ZZZZ. Each unit is required to comply with certain federal emission standards and operating limitations over the useful life of the unit. As the owner/operator of the unit(s), the DEQ advises you to review the NSPS and MACT to ensure compliance with applicable emission standards, operational limitations, and the monitoring, notification, reporting and records. Applicable notifications shall be sent to EPA, Region III. Both the NSPS and MACT can be found at [www.ecfr.gov](http://www.ecfr.gov).

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provide that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this case decision notice was mailed or delivered to you. Please consult the relevant regulations for additional requirements for such requests.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal of this decision by filing a Notice of Appeal with:

David K. Paylor, Director  
Department of Environmental Quality  
PO Box 1105  
Richmond, VA 23218-1105

If this permit was delivered to you by mail, three days are added to the thirty-day period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

If you have any questions concerning this permit, please contact Laura Corl by phone at (757) 518-2178 or by e-mail at [laura.corl@deq.virginia.gov](mailto:laura.corl@deq.virginia.gov).

Sincerely,



Maria R. Nold  
Regional Director

MRN/SO/61713\_001\_16\_NSRnew\_LifeNetHealth.docx

Attachment: Permit  
Source Testing Report Format

cc: Manager/Inspector, Air Compliance



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### ARTICLE 6 – NEW SOURCE REVIEW STATIONARY SOURCE PERMIT TO CONSTRUCT AND OPERATE

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

LifeNet Health  
1864 Concert Drive  
Virginia Beach, Virginia 23453  
**Registration No.: 61713**

is authorized to construct and operate

a sterilization facility

located at

5733 Bayside Road, Suites 103-108  
Virginia Beach, Virginia 23455

in accordance with the Conditions of this permit.

Approved on: March 30, 2016

  
\_\_\_\_\_  
Maria R. Nold

**March 30, 2016**  
Signature Date

Permit consists of 6 pages.  
Permit Conditions 1 to 20.

## **INTRODUCTION**

This permit approval is based on the permit application dated December 28, 2015 including amendment information dated February 1, 2016 and provided by phone conversation on February 10, 2016. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action. In addition, this facility may be subject to additional applicable requirements not listed in this permit.

Words or terms used in this permit shall have meanings as provided in 9VAC5-10-20 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. The regulatory reference or authority for each condition is listed in parentheses ( ) after each condition.

Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact.

The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.2-3700 through 2.2-3714 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9VAC5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.

**Equipment List** - Equipment at this facility consists of the following:

<b>Equipment to be Constructed:</b>			
<b>Reference No.</b>	<b>Equipment Description</b>	<b>Rated Capacity</b>	<b>Federal Requirements</b>
ETOS-7	EtO Sterilizer (3M Steri-Vac 8XL)	0.031 lb EtO/hr	
ETOS-9	EtO Sterilizer (3M Steri-Vac 8XL)	0.031 lb EtO/hr	
ETOS-10	EtO Sterilizer (3M Steri-Vac 8XL)	0.031 lb EtO/hr	

<b>Equipment Exempt from Permitting</b>			
<b>Reference No.</b>	<b>Equipment Description</b>	<b>Rated Capacity</b>	<b>Exemption Citation</b>
BG-4	Emergency generator (Caterpillar 3456)	11.2 mmBtu/hr	9VAC5-80-1105.C.1.

Specifications included in the above tables are for informational purposes only and do not form enforceable terms or conditions of the permit.

## **PROCESS REQUIREMENTS**

1. **Emission Controls** - Ethylene oxide emissions from the EtO sterilizers ETOS-7, ETOS-9, and ETOS-10 shall be controlled by EtO abators AB-D and AB-E. The EtO abators shall be provided with adequate access for inspection and shall be in operation when the associated sterilizers are operating.  
(9 VAC 5-80-1180 and 9 VAC 5-50-260)
2. **Control Efficiency** - The EtO abators AB-D and AB-E shall maintain a control efficiency of no less than 99 percent to be demonstrated by stack test as required by Conditions 8 and 9.  
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

3. **Monitoring Devices** - The EtO abators AB-D and AB-E shall each be equipped with devices to continuously measure and record the temperature of the catalyst bed concurrently with the EtO sterilizer operating cycle parameters sufficient to demonstrate compliance with the minimum operating temperatures established during initial stack test. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the EtO sterilizers and EtO abators are operating.  
(9 VAC 5-80-1180 D and 9 VAC 5-50-260)
4. **Monitoring Device Observation** – To ensure good performance, the EtO abator monitoring devices used to continuously measure the temperature of the catalyst beds shall be observed by the permittee with a frequency of not less than once per day. The permittee shall continuously record measurements from each EtO abator monitoring device. Daily observations shall be recorded in a log book including name of observer, date and time of observation and catalyst bed temperature or monitoring-device readout by verification of the Abator Ready Light. Use of this Ready Light is contingent on the successful completion of annual device calibrations, testing and maintenance in accordance with manufacturer's recommendations to ensure proper function.  
(9 VAC 5-80-1180 D)
5. **EtO Abator Operations** – The permittee shall establish and maintain a preventative maintenance and calibration plan per manufacturer recommendations for the EtO abators AB-D and AB-E. The plan shall include, but is not limited to, planned parts replacement, temperature checks, instrument adjustments, inspections and catalyst bed replacement. Following catalyst bed replacement, verification checks shall be conducted by the manufacturer to ensure the required temperature is met prior to releasing to the permittee for operations. Records shall be kept of each maintenance and calibration event including catalyst bed replacement and verification results.  
(9 VAC 5-80-1180 D)

#### **OPERATING LIMITATIONS**

6. **Throughput** - The throughput of ethylene oxide for the EtO sterilizers ETOS-7, ETOS-9, and ETOS-10, combined, shall not exceed 819 lbs per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.  
(9 VAC 5-80-1180)

## **RECORDS AND REPORTS**

7. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Tidewater Regional Office. These records shall include, but are not limited to:
- a. Annual throughput of ethylene oxide, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
  - b. Control efficiency of the EtO abators demonstrated by the stack tests required by Conditions 8 and 9.
  - c. Operation and control device monitoring records for the EtO abators as required in Conditions 3 and 4.
  - d. Catalytic bed temperature observation logbook including name of observer, date and time of observation, and catalyst bed temperature as required in Condition 4.
  - e. Records of annual Abator Ready Light device calibrations, testing and maintenance, if applicable, as required in Condition 4.
  - f. Records of maintenance and calibration events including catalyst bed replacement and verification results as required in Condition 5.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-80-1180 and 9 VAC 5-50-50)

## **INITIAL COMPLIANCE DETERMINATION**

8. **Stack Test** - An initial performance test for EtO emissions from one of the EtO sterilizer – EtO abator sets shall be conducted to determine compliance with the control efficiency in Condition 2. The test shall be performed within 60 days after achieving the maximum operation rate at which the facility will be operated, but in no event later than 180 days after start-up of the permitted facility. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 and 9 VAC 5-60-30 and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410 and 9 VAC 5-60-70. The details of the tests are to be arranged with the Director, Tidewater Regional Office. One copy of the results shall be submitted to the Director, Tidewater Regional Office within 45 days after the test completion and shall conform to the test report format enclosed with this permit.

(9 VAC 5-50-30 F)

## **CONTINUING COMPLIANCE DETERMINATION**

9. **Stack Test** - Once every three (3) years, or upon request by the DEQ, the permittee shall conduct a performance test for EtO emissions from one of the EtO sterilizer – EtO abator sets to demonstrate continuing compliance with the control efficiency in Condition 2. Each of the EtO sterilizer – EtO abator sets shall be tested once in a nine (9) year period. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 and 9 VAC 5-60-30 and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410 and 9 VAC 5-60-70. The details of the tests are to be arranged with the Director, Tidewater Regional Office. One copy of the results shall be submitted to the Director, Tidewater Regional Office within 45 days after the test completion and shall conform to the test report format enclosed with this permit.

(9 VAC 5-50-30 G)

10. **Emissions Testing** - The permitted facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. This includes constructing the facility/equipment such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing a stack or duct that is free from cyclonic flow. Sampling ports shall be provided when requested at the EtO abator stack in accordance with the applicable performance specification (reference 40 CFR Part 60, Appendix B) and safe sampling platforms and access shall be provided.  
(9 VAC 5-50-30 F and 9 VAC 5-80-1180)

#### **NOTIFICATIONS**

11. **Initial Notifications** - The permittee shall furnish written notification to the Tidewater Regional Office of:
- The actual date on which installation of the EtO sterilizers and EtO abators commenced within 30 days after such date.
  - The actual start-up date of the EtO sterilizers and EtO abators within 15 days after such date.  
(9 VAC 5-50-50 and 9 VAC 5-80-1180)

#### **GENERAL CONDITIONS**

12. **Permit Invalidation** - This permit to install and operate the sterilizers and abators shall become invalid, unless an extension is granted by the DEQ, if:
- A program of continuous construction is not commenced within 18 months from the date of this permit; or
  - A program of construction or modification is discontinued for a period of 18 months or more, or is not completed within a reasonable time, except for a DEQ approved period between phases of a phased construction project.  
(9 VAC 5-80-1210)
13. **Permit Suspension/Revocation** - This permit may be suspended or revoked if the permittee:
- Knowingly makes material misstatements in the permit application or any amendments to it;
  - Fails to comply with the conditions of this permit;
  - Fails to comply with any emission standards applicable to a permitted emissions unit;
  - Causes emissions from the stationary source which result in violations of, or interfere with the attainment and maintenance of, any ambient air quality standard; or
  - Fails to operate in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect at the time an application for this permit is submitted.  
(9 VAC 5-80-1210 F)

14. **Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:
- To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;
  - To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;
  - To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and
  - To sample or test at reasonable times.
- For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.  
(9 VAC 5-170-130 and 9 VAC 5-80-1180)
15. **Maintenance/Operating Procedures** – At all times, including periods of start-up, shutdown and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.  
(9 VAC 5-50-20 E and 9 VAC 5-80-1180 D)
16. **Record of Malfunctions** – The permittee shall maintain records of the occurrence and duration of any bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment that results in excess emissions for more than one hour. Records shall include the date, time, duration, description (emission unit, pollutant affected, cause), corrective action, preventive measures taken and name of person generating the record.  
(9 VAC 5-20-180 J and 9 VAC 5-80-1180 D)
17. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Tidewater Regional Office of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone or telegraph. Such notification shall be made as soon as practicable but no later than four daytime business hours after the malfunction is discovered. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within two weeks of discovery of the malfunction. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify the Tidewater Regional Office.  
(9 VAC 5-20-180 C and 9 VAC 5-80-1180)
18. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.  
(9 VAC 5-20-180 I and 9 VAC 5-80-1180)
19. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Tidewater Regional Office of the change of ownership within 30 days of the transfer.  
(9 VAC 5-80-1240)
20. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.  
(9 VAC 5-80-1180)



## SOURCE TESTING REPORT FORMAT

### Report Cover

Plant name and location  
Units tested at source (indicate Ref. No. used by source in permit or registration)  
Test Dates  
Tester; name, address and report date

### Certification

Signed by team leader/certified observer (include certification date)  
Signed by responsible company official  
\*Signed by reviewer

### Copy of approved test protocol

### Summary

Reason for testing  
Test dates  
Identification of unit tested & the maximum rated capacity  
\*For each emission unit, a table showing:  
    Operating rate  
    Test Methods  
    Pollutants tested  
    Test results for each run and the run average  
    Pollutant standard or limit  
Summarized process and control equipment data for each run and the average, as required by the test protocol  
A statement that test was conducted in accordance with the test protocol or identification & discussion of deviations, including the likely impact on results  
Any other important information

### Source Operation

Description of process and control devices  
Process and control equipment flow diagram  
Sampling port location and dimensioned cross section Attached protocol includes: sketch of stack (elevation view) showing sampling port locations, upstream and downstream flow disturbances and their distances from ports; and a sketch of stack (plan view) showing sampling ports, ducts entering the stack and stack diameter or dimensions

### Test Results

Detailed test results for each run  
\*Sample calculations  
\*Description of collected samples, to include audits when applicable

### Appendix

\*Raw production data  
\*Raw field data  
\*Laboratory reports  
\*Chain of custody records for lab samples  
\*Calibration procedures and results  
Project participants and titles  
Observers' names (industry and agency)  
Related correspondence  
Standard procedures

\* Not applicable to visible emission evaluations